APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,947	01/03/2002	William R. Freund JR.	1787-12700	2139

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EXAMINER
LAU, TUNG S

ART UNIT	PAPER NUMBER
2863	

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No.	Applicant(s)
	10/038,947	FREUND ET AL.
	Examiner	Art Unit
	Tung S Lau	2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 January 2002</u> .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-23</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-4,6,7,10-12,14,17 and 19-23</u> is/are rejected.

7)☒ Claim(s) <u>5,8,9,13,15,16 and 18</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____ .

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 10, 20, 22, 2, 3, 4, 6, 7,11, 12, 14, 17, 19, 21 and 23 are rejected under

35 U.S.C. 102(b) as being anticipated by Motegi et al. (U.S. Patent 4,930,358).

Regarding claim 1:

Motegi discloses a method to detect a peak selection error in a waveform,

comprising: a) measuring a first average transit time for one or more ultrasonic

signals along a first path in a pipeline (col. 2, lines 55-63); b) measuring a second

average transit time for one or more ultrasonic signals along a second path in

said pipeline (col. 2-3, lines 64-25), said second path being of different length

than said first path (col. 8, lines 14-23); C) determining whether there exists a

peak selection error based on the length of said first path, the length of said

second path, said first average transit time, and said second average transit time

(col. 8, lines 14-23, fig.2, 4, 8).

Regarding claim 10:

Motegi discloses an ultrasonic metering system, comprising: a first transducer

pair defining a first ultrasonic path having a first path length (abstract, fig. 1, unit

3); a second transducer pair defining a second ultrasonic path having a second

path length (col. 8, lines 14-23); one or more processors associated with said first

and second transducer pairs (fig. 1, unit 19), said one or more processors

suitable to determine a first average transit time measurement for ultrasonic

signals across said first ultrasonic path and a second average transit time

measurement for ultrasonic signals across said second ultrasonic path (fig. 2,3,

5), wherein said processor is programmed to identify simultaneously

measurement errors in said first and second transit time measurements (fig. 8,

col. Lines 14-23).

Regarding claim 20:

Motegi discloses a method to determine transit time measurement errors in an

ultrasonic meter, comprising a) measuring a first average transit time for one or

more ultrasonic signals along a first path in a pipeline(col. 2, lines 55-63); b)

measuring a second average transit time for one or more ultrasonic signals along

a second path in said pipeline (col. 2-3, lines 64-25), said second path being of

different length than said first path (col. 8, lines 14-23); C) a step for determining

transit time measurement errors in an ultrasonic meter (fig. 7).

Regarding claim 22:

Motegi discloses an ultrasonic meter comprising: a first transducer pair to

generate and receive a first set of ultrasonic signals (fig. 2); a second transducer

pair to generate and receive a second set of ultrasonic signals (col. 3, lines 3-25);

means for measuring transit times for said first set of ultrasonic signals and said

second set of ultrasonic signals (fig. 2); means for determining transit time

measurement errors in said measured transit times for said first set of ultrasonic

signals and said second set of ultrasonic signals (col. 8, lines 14-23).

Regarding claims 2, 3, 4, 6, 7, 11, 12, 14, 17, 19, 21 and 23:

Motegi discloses a method to detect a peak selection error in a waveform,

including computing the size and direction of peak error (fig. 7, 8); correcting for

selection peak error (col. 8, lines 1-28); $n=(Lb*Ta/\Delta L)- (La*Tb/\Delta L)$ (fig. 8); LA,

LB= length of the chord a,b, Ta, Tb= average time of ultrasonic signal in a, b,

$\Delta L=Lb-La$ (fig. 8); is less than one period of the ultrasonic signal; included the

speed of sound calculation (abstract), error can be positive (fig. 8), identifies error

using transient time of the path (fig. 8), use on a pipeline (fig. 1).

Claim Objection

2.   Claim 21 is objected to because an error on claim dependency. 'The method of

claim 21', the examiner assumes it means 'The method of claim 20' for the rest of

the application, correction is required.

3.   Claims 5, 8, 9, 13, 15, 16 18 are objected to as being dependent upon a rejected

base claim, but would be allowable if rewritten in independent form including all

the limitation of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: prior art fail to

teach the predetermined value is less than one period of the ultrasonic signal, the

use of equation n=(Lb*La (Ca-Cb))/(ΔL*Ca*Cb) , if the absolute value of n is greater than a predetermined value.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 703-305-3309. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 703-308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841 for regular communications and 703-308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TC2800 RightFAX Telephone Numbers : TC2800 Official Before-Final RightFAX - (703) 872-9318, TC2800 Official After-Final RightFAX - (703) 872-9319

TC2800 Customer Service RightFAX - (703) 872-9317

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